

# The University of Leeds

## EXTERNAL EXAMINER'S REPORT

ACADEMIC YEAR: 2014– 2015

### Part A: General Information

#### Subject area and awards being examined

Faculty / School of:	Earth and Environment
Subject(s):	<i>Geophysics Sciences</i>
Programme(s) / Module(s):	<i>3-year and 4-year degrees; BSc and MGeophys</i>
Awards (e.g. BA/BSc/MSc etc):	BSc, MGeophys

#### Name and home Institution / affiliation of Examiner

#### Completed report

The completed report should be attached to an e-mail and sent as soon as possible, and no later than six weeks after the relevant meeting of the Board of Examiners, to [exexadmin@leeds.ac.uk](mailto:exexadmin@leeds.ac.uk).

Alternatively you can post your report to: **Head of Quality Assurance**  
Room 12:81, EC Stoner Building  
The University of Leeds, Leeds LS2 9JT

### Part B: Comments for the Institution on the Examination Process and Standards

#### **Matters for Urgent Attention**

*If there are any areas which you think require urgent attention before the programme is offered again please note them in this box*

None

#### **Only applicable in first year of appointment**

*Were you provided with copies of previous relevant External Examiners' reports and the response of the School to these?*

Yes – and good to see.

#### **For Examiners completing their term of appointment**

*Please comment on your experience of the programme(s) over the period of your appointment, remarking in particular on changes from year to year and the progressive development and enhancement of the learning and teaching provision, on standards achieved, on marking and assessment and the procedures of the School*

#### Standards

- Please indicate the extent to which the programme Aims and Intended Learning Outcomes (ILOs) were commensurate with the level of the award**
  - The appropriateness of the Intended Learning Outcomes for the programme(s)/modules and of the structure and content of the programme(s);*
  - The extent to which standards are appropriate for the award or award element under consideration.*

I have been impressed by the quality of the taught programmes offered for both BSc and MGeophys. The programmes are rigorous in terms of their content, are well-delivered and assessed.

This year there was a range of final degree marks ranging from 72 to 51% (excluding those with special circumstances) which seemed appropriate given the scripts and coursework I inspected. In most cases degree performances has been pretty consistent from first year through to final year.

**2. Did the Aims and ILOs meet the expectations of the national subject benchmark (where relevant)?**

- *The comparability of the programme(s) with similar programme(s) at other institutions and against national benchmarks and the Framework for Higher Education Qualifications.*

The programmes are well designed and respected. Standards overall are at least as good as at other Russell group universities where I have been examiner, particularly in terms of the level of geophysics taught (numeracy).

**3. Please comment on the assessment methods and the appropriateness of these to the ILOs**

- *The design and structure of the assessment methods, and the arrangements for the marking of modules and the classification of awards;*
- *The quality of teaching, learning and assessment methods that may be indicated by student performance.*

I believe that the assessment methods do address fully the ILOs. As examiner I was given substantial access to coursework, much of which had been submitted electronically. I think that access to this material substantially addresses issues raised by the previous Geophysics examiner <>.

There is a good range of assessment methods including examination, coursework, fieldwork, and the final dissertation. In general the balance of examination versus coursework looks about right.

I, like the previous External Examiner, am concerned by the Inverse Theory module. SOEE3250. This module had a low exam mark of 53% compared to a coursework mark of 77%. The exam mark dominantly determines the module average (57.8%) as the module is 80% exam to 20% coursework. Last year the exam mark was 52% and this was scaled up to 59%. In the commentary reply to this it was said that this was due to a new member of staff teaching the module. The module leader comments this year could be read as a bit flippant given the concern from the previous year. For the BSc component he wrote "1 fails, 3 lower seconds, 2 upper seconds, and 3 firsts, so a reasonable spread. The mean mark is slightly on the low side, but within the permitted range". What I see in the marks is a bi-modal mark distribution for the BSc students. When looking at the range of modules completed by the BSc students, there is a common factor that this is the lowest module mark for the lower 50% of students. I do wonder whether this module is too much aimed at the MGeophys cohort and not sufficiently tailored to the 3 year degree programme. I can quite understand the issues around scaling, but wonder whether the impact of this module on final degree classification of the BSc students was fully considered. I found it very difficult to check the examination script marking for this module due to very sparse commentary on the exam scripts (see section 13).

**4. Were students given adequate opportunity to demonstrate their achievement of the Aims and ILOs?**

- *The academic standards demonstrated by the students and, where possible, their performance in relation to students on comparable courses;*
- *The strengths and weaknesses of the students as a cohort.*

There are an excellent range of modules within the Geophysics programmes at Leeds. I looked closely at the performance of the graduating students and these students achieved a broad range of marks/degree classes which shows that the programmes allow the best students to excel.

The geophysics degree has a large number of modules specifically tailored for the degree course. Notably well designed modules include SOEE2250 Numerical methods and Statistics, SOEE2212 Tectonophysics, SOEE2190 Time series analysis, and particularly SOEE2550 Applied Geophysics. The unit SOEE3740 seismic interpretation and SOEE5141 Near Surface Geophysics look particularly innovative (but see comment below re being MSc only).

The field course element of the degree seems particularly well thought-through and is a strength.

I was disappointed that no undergraduate students did the modules SOEE3740 seismic interpretation, and SOEE5141 Near Surface geophysics, I believe this was because there the modules were full due to the MSc course in Petroleum Geology being oversubscribed. Do students do seismic interpretation in other modules?

When I met with the students by skype, they were very positive about the course overall. However they singled out SOEE2660 – Maths 4 as an issue in terms of learning during lectures. I note however that the course mean for this unit was high (71%), suggesting that the students did well. There was no student feedback questionnaire completed for this module which was disappointing. On blackboard I could find some good course notes, but no lecture material. I would suggest that the School looks closely at the delivery of this module.

The quality of writing in their final year research projects is decidedly mixed, from poor to quite good, but overall a bit disappointing. This detracts from the very good analysis and interpretation within these projects which are generally on topics that stretch the students. I would suggest that the module co-ordinator/programme leader look at how scientific writing might be improved.

**5. For Examiners responsible for programmes that include clinical practice components, please comment on the learning and assessment of practice components of the curriculum**

N/A

**6. Please comment on the nature and effectiveness of enhancements to the programme(s) and modules since the previous year**

*It would be particularly helpful if you could also identify areas of good practice which are worthy of wider dissemination.*

This is my first year as external examiner. One notable change since the previous year was the substantial increase in coursework available to the external examiner either in paper form or electronically. I think that this is good practice.

**7. Please comment on the influence of research on the curriculum and learning and teaching**

*This may include examples of curriculum design informed by current research in the subject; practice informed by research; students undertaking research.*

There is plenty of evidence of research-led teaching in the curriculum, especially in terms of the research projects which the students undertook.

**8. Where the programme forms part of an Integrated PhD, please comment on the appropriateness of the programme as training for a PhD**

N/A

**For Examiners involved in mentoring arrangements**

**9. If you have acted as a mentor to a new External Examiner or have received mentor support please comment here on the arrangements**

N/A

**The Examination/Assessment Process**

**10. The University and its Schools provide guidance for External Examiners as to their roles, powers and responsibilities. Please indicate whether this material was sufficient for you to act effectively as an External Examiner.**

*Whether External Examiners have sufficient access to the material needed to make the required judgements and whether they are encouraged to request additional information.*

I was given sufficient information on arrival.

**11. Did you receive appropriate documentation relating to the programmes and/or parts of programmes for which you have responsibility, e.g. programme specifications or module handbooks, marking criteria?**

*The coherence of the policies and procedures relating to External Examiners and whether they match the explicit roles they are asked to perform.*

Yes in electronic form. The administrative support provided was excellent during my visit in June 2015.

**12. Were you provided with all draft examination papers/assessments? Was the nature and level of the questions appropriate? If not, were suitable arrangements made to consider your comments?**

During the year I was given the opportunity to comment on draft examination papers. I think the level and nature of the questions was appropriate.

**13. Was sufficient assessed / examined work made available to enable you to have confidence in your evaluation of the standard of student work? Were the scripts clearly marked/annotated?**

I looked closely at the modules that I was asked to overview. In terms of examination scripts, I was pleased to see substantial annotation on the scripts, which together with the model answer, and the summary sheet containing comments by the module co-ordinator and module moderator allowed me to fully understand how the final mark was determined. I like the practice of having an assigned module moderator for each course. The only module which was deficient in terms of script annotation was SOEE3250 Inverse Theory which had a few sparse numbers and no comments what-so-ever. The module moderator had picked up on this, but no further annotation had been added to the scripts. I hope that this is fixed for future years, as I could not check whether this module had been fairly marked.

For nearly all modules, I was provided either with paper copies of the coursework, or had access via the VLE. Within the VLE there was evidence of excellent feedback to the students for many modules.

**14. Was the choice of subjects for dissertations appropriate? Was the method and standard of assessment appropriate?**

There was a good range of dissertation topics. The documentation and quality of the assessment was very good, with double-marking, and occasional third marking where necessary. I detect some reluctance to mark highly at the top end of the scale – I thought that marking for the best projects was pretty tough. Please see comments above re quality of the writing.

**15. Were the administrative arrangements satisfactory for the whole process, including the operation of the Board of Examiners? Were you able to attend the meeting? Were you satisfied with the recommendations of the Board?**

Yes

**16. Were appropriate procedures in place to give due consideration to mitigating circumstances and medical evidence?**

Yes

**Other comments**

**Please use this box if you wish to make any further comments not covered elsewhere on the form**

**School of Earth and Environment**  
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**UNIVERSITY OF LEEDS**

5<sup>th</sup> August 2015

Dear

**RE: Response to External Examiner's Report (Geophysical Sciences) 2014-15**

I would like to thank you again for examining our Geophysical Sciences degree programmes. Your views are an essential part of our quality assurance mechanism and we welcome your input into our teaching processes.

I am pleased to note that, in general, you were impressed with the quality of our BSc and MGeophys degree programmes and consider them rigorous and well-delivered and assessed. It is encouraging to receive such positive feedback from someone who has been an external examiner at other Russell group universities, while knowing that we have room for improvement. In particular, you reported issues with a number of modules, which I discuss below.

Similar to the previous external examiner, you expressed some concern regarding the large difference between coursework and exam marks for SOEE3250 Inverse Theory, as well as the poor performance of the BSc students. The Programme Leader met with the Module Leader last summer to discuss these problems, but they have persisted. It is worth noting that a large difference between coursework and exam marks is observed in other modules and dealing with it is difficult. The Programme Leader recently met with the Module Leader again to discuss the ongoing challenges. He commented that students often assist each other with coursework, as is expected and to an extent encouraged, and a solution may be to have them complete the assessments in-class. In addition, he suggested that he could change the level of the BSc exam. These seem sensible solutions. In regard to the lack of annotation on exam scripts, we will ensure that these will be annotated in future.

SOEE2660 Mathematics for Geophysical and Environmental Science 4 was also highlighted after being brought to your attention by the students during your Skype meeting. In fact, they had already brought it to our attention. We responded to this by arranging for a demonstrator to give a revision session during the exam period. In addition, the Director of Student Education met with the Module Leader in May. She encouraged him to correct course notes on the VLE, use the whiteboard effectively in class and recruit a demonstrator to support problems classes. She also reminded him about the need to gather student feedback through the module surveys and to talk to colleagues to get advice on good classroom practice in the discipline. The Programme Leader will follow this up.

You commented in your report that you were disappointed that no undergraduate students took the modules SOEE3740 Seismic Interpretation and SOEE5141M Near Surface Geophysics. SOEE3740 is not offered to Geophysical Sciences students in their final year, as parts of the material in the module are covered in SOEE2550 Applied Geophysics. Both modules evolved out of SOEE2232 Exploration Seismics. We share your disappointment that students were unable to take SOEE5141M due to the large student numbers enrolled on the MSc in Exploration Geophysics. This is one of the issues that we have received the largest number of complaints about. In fact, due to a recent reorganization of the MSc in Exploration Geophysics this module no longer exists.

However, in light of your comments and those from final year MGeophys students this module will be revived in a revised format, with no field trip. The field trip was for the benefit of MSc students, and covered skills that the Geophysical Sciences students learn elsewhere. In addition, note that, much of the material covered in SOEE5141M is taught in SOEE3350 Geoelectrics.

You brought the issue of writing to our attention again, in particular, in regard to the final year research projects. We agree that poor quality of writing often detracts from the high quality research that the students produce. We took some steps to remedy this issue last year, when we changed the level 1 Geophysical Sciences academic tutorials to a small group system, where students get feedback on written work from their personal tutor in a small group setting, rather than as a cohort in a lecture. The benefits of this should become apparent in future years. In addition, the Programme Delivery Team has decided to review the level of feedback given to students on their dissertation, before submission. Note that, the University of Leeds policy on proof-reading allows supervisors to comment on the text, but not edit it. Your comment regarding a reluctance to award marks at the top end of the scale will be passed on to dissertation markers. Excellence should be rewarded.

In regard to your experience as an external examiner within the School of Earth and Environment, I am pleased that you were easily able to access all of the coursework. This is something that the Student Education Service Office worked hard to improve this year and all of the credit goes to them.

Based on comments from the previous external examiner, we moved your meeting with students to earlier in the academic year, in an attempt to increase attendance. Despite this, from what I understand, the group was small and most of the students were in their second year. To try to increase the number of students that attend these meetings, we are making meeting with the external examiner part of the job description for being a course representative. I hope that this means that there will be a more representative group of students to meet with you in the future.

Thank you again for your helpful comments on the programmes.

Yours sincerely,

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